Сион, D. M. (Engr.); Krushnikov, A. G. (Cand. Tech. Sci., Docent);

"Properties and Heat Treatment of Alloys for Elastic Elements of Instruments,"
   Termicheskaya obrabotka i prochnost' metallov i splavov; sbornik statey (Heat
   Treatment and Strength of Metals and Alloys; Collection Articles) Moscow,
   Mashgiz, 1958, 177 p.

A highly sensitive method was developed and a device designed for testing the
properties of metal diaphragms for instruments. The diaphragms tested were made
of beryllium bronze, phosphor bronze, and a high-alloy steel (N36KhTYu) contain-
ing nickel, chrome, titanium, and aluminum. Tests made on the diaphragms after
heat treatment showed that their properties depend strongly on the temperature
and length of aging, during which a decomposition of solid solutions takes place.
Aging increases hardness and the elastic limit up to a certain maxiumum, whose
position in time depends on the temperature of aging. Hysteresis, residual de-
formations, and sag are at their minimum approximately at those temperatures at
which the properties associated with strength are most pronounced. Thus it is seen
that these properties of the diaphragms are linked with the structure of the alloys;
the higher the resistance of the development of microplastic deformations, the
smaller the degree of hysteresis. On the basis of these findings, certain methods
of heat treatment are recommended for diaphragms made of the alloys specified above.

SOV/137-58-11-22981

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 164 (USSR)

AUTHORS: Rakhshtadt, A. G., Shur, D. M.

TITLE: Properties and Heat Treatment of Alloys Used for Elastic Members
            of Instruments (Svoystva i termicheskaya obrabotka splavov dlya
            uprugikh elementov priborov)

PERIODICAL: V sb.: Term. obrabotka i prochnost' metallov i splavov. Moscow,
              Mashgiz, 1958, pp 65-114

ABSTRACT: Properties were investigated and a technique was developed for the
             heat treatment of corrugated membranes made of Be-bronzes Br. B2
             and Br. B2.5, of P bronze Br.0F6.5-0.15, and of steel N36KhT1-0.
             To test the membranes a special device was used which accomplishes
             the determination of the properties of the membranes by the non-
             contact method. It is established that the properties of the membranes
             depend greatly upon the temperature and the aging period. The follow-
             ing procedures for the heat treatment of membranes are recommended:
             a) for N36KhT1-0 steel heating in a salt bath (35% NaCl + 65% BaCl$_2$)
             at 950°C ± 10°, cooling in water, aging in a vacuum furnace at 680-700°
Card 1/2   1.5-2 hours; b) for Br. B2 heating in N dissociation medium at

SOV/137-58-11-22981

Properties and Heat Treatment of Alloys Used for Elastic Members (cont.)

$790^\circ \pm 10^\circ$, cooling in water, aging in a vacuum furnace at 350° 45 min. It is established that Br. B 2.5 has no advantages over Br. B2 and that Br. OF 6.5 - 0.15 is not suitable for membranes, because it is difficult to shape. Bibliography: 43 references.

T. F.

Card 2/2

28(5)   SOV/32-25-5-25/56
AUTHOR: Shur, D. M.

TITLE: Strength Method for the Determination of Residual Tensions
               (Silovoy metod opredeleniya ostatochnykh napryazheniy)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, pp 588-591 (USSR)

ABSTRACT: According to the mechanical methods used today for the determina-
               tion of residual tensions (RT) of the 1st order (Refs 1-3)
               the latter are calculated as functions of the measured deforma-
               tions under utilization of the generalized law by Hooke, so
               that these methods may be called in principle "deformation
               methods" (DF). The (RT) however, may also be determined in
               another way, i.e. according to the "strength method" (SM).
               The latter is applied by adding an external load to the sample
               to be investigated which after discharge of the (RT) would
               again lose its deformation, so that the previous dimensions
               are again given to the sample. According to the magnitude of
               the load applied the magnitude and direction of the inner
               strains may be determined, which the sample possessed before
               being treated (by cutting, pickling, turning, etc) on the
               respective spot. The application of this method was tested
               for the study of the tangential (RT) that are formed in a
Card 1/2   plastic torsion of round cylindrical parts. Samples of steel

Strength Method for the Determination of Residual Tensions

45 KhNMFA were investigated and tests were made on a turning
lathe (Fig 1) with special facilities. The measuring results
obtained are given (Table). A comparison of the calculation
formulas of the method (DF) and (SM) shows that in the latter
neither the modulus of elasticity nor the length of the cut
layer must be considered, so that the cutting of the sample
is considerably made easier. Diagrams are given concerning
the variation of the (RT) and the torsional moment as a func-
tion of the radius of the layer (for hardened and then drawn
samples)(Fig 2). One of the advantages of the new method is
also the abovementioned independence of the elastic proper-
ties of the material, so that also such materials may be
checked, which do not obey Hooke's law. There are 2 figures,
1 table, and 3 references, 2 of which are Soviet.

Card 2/2

SHUR, D.M.

Applying the load method to the study of residual stresses in bars
bent in the process of plastic deformation. Zav.lab. 26   no.2:
205-208 '60.
                                                     (MIRA 13:5)
          (Steel--Testing)
          (Strains and stresses)

S/032/60/026/05/39/063
B010/B008

AUTHORS: Lyubchik, M. A., Trusov, L. P., Shur, D. M.

TITLE: Device for Programmed Tests of Heat-resistant Materials for
             Creep Strength

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 5, pp. 615-616

TEXT: A device (Fig. 1, Scheme) for programmed tests of heat-resistant
materials for creep strength at changing temperature- and load conditions
is described. The device is designed on the basis of a unit of the mass-
produced machine of the TsNIIMASh design of type IP-4M. The individual
technical data are mentioned. The electric circuit was worked out by
V. I. Krizental'. The test sample (placed in the clamping jaw of the
machine) is heated automatically by an electric furnace according to
the program, and can also be cooled by compressed air. Loading is done
by means of a weight which is displaced on a load beam. Programming of
the experiment is done by an apparatus of type KEP-12/61. The 8 contacts
are connected in series to an RPT-100 relay. The programming of the

Card 1/2

Device for Programmed Tests of Heat-
resistant Materials for Creep Strength

S/032/60/026/05/39/063
B010/B008

temperature change is carried out by a differential circuit, an EPD-12[28]
potentiometer being used as a regulation device, and is controlled by
a self-recording instrument of type EPP-09[28] The loading mechanism is
directed by means of automatically operating switches. A thermogram
(Fig. 2) obtained with the instrument described is mentioned. There
are 2 figures.

Card 2/2

KUDRYAVTSEV, I.V.,prof.; SHUR, D.M., inzh.

"Structure and analysis of metal fractures" by IA.B.Fridman,
T.A.Gordeeva, A.M.Zaitsev. Reviewed by I.V.Kudriavtsev. Zav.
lab. 26 no.8:1037-1038 '60.   (MIRA 13:10)
        (Metals--Testing) (Deformations (Mechanics))
      (Fridman, IA.B.) (Gordeeva, T.A.) (Zaitsev,A.M.)

44598

S/135/63/000/002/010/015
A006/A101

AUTHORS: Zaytsev, G. Z., Candidate of Technical Sciences, Shur, D. M.,
              Engineer

TITLE: The strength and nature of failure of weld joints, connecting
              sleeves with pipe bodies, during internal pressure loads

PERIODICAL: Svarochnoye proizvodstvo, no. 2, 1963, 30 - 32

TEXT: Grade 22K and 20T steel sleeves and branch pipes were welded onto
pipe bodies. The strength of the welds was tested on a ГКМ-10,000 (GKM-10,000)
compressor unit, using a mixture of 70% spindle oil with 30 kerosene; the mo-
dulus of volumetric pressure of the liquid was about 15,000 kg/cm^2. Sleeves of
different size were tested after welding, high-tempering at 650°C and tempering
at 450°C for 4.5 h. The axial rupture stresses, σ_z were determined from rupture
pressure P using a formula for thin-walled containers $\sigma_z = \frac{PD}{4\delta}$ where D is the in-
ternal sleeve diameter and δ is the thickness of the pipe wall. The tests show
that the strength of welds on the sleeves was 30 - 40% below that of the base

Card 1/2

KUDRYAVTSEV, I.V., doktor tekhn.nauk, prof.; ZAYTSEV, G.Z., kand.tekhn.nauk;
SHUR, D.M., inzh.; NAUMCHENKOV, N.Ye., kand.tekhn.nauk

"Dynamic strength of weld joints in low-carbon and low-alloy
steels" by A.E. Asnis. Reviewed by I.V. Kudriavtsev and others.
Svar. proizv. no.9:44-45 S '62.   (MIRA 15:12)
                         (Steel—Welding)
                         (Asnis, A.E.)

GOZENPUT, M.D.; SHUR, D.P.; LYCHAGIN, V.I., nauchn. red.

    [Photorelay in the wood-using industries] Fotorele v
    derevoobrabatyvaiushchei promyshlennosti. Moskva, TSentr.
    nauchno-issl. in-t informatsii i tekhniko-ekon. issledova-
    nii po lesnoi, tselliulozno-bumazhnoi, derevoobrabaty-
    vaiushchei promyshl. i lesnomu khoziaistvu, 1963. 36 p.
                                   (MIRA 17:5)
    1. Vsesoyuznyv nauchno-issledovatel'skiy i konstruktorskiy
    institut derevoobrabatyvayushchego mashinostroyeniya.

TSEGEL'SKIY, Vladimir Leopol'dovich; SHUR, D.S., redaktor; KRYNOCHKINA, K.V., tekhnicheskiy redaktor

[Elektrodugovaia svarka. Izd. 2-e, ispr. i dop. Moskva, Vsesoiuznoe uchebno-pedagog. izd-vo, Trudrezervizdat, 1954. 174 p.   (MIRA 8:4)
(Electric welding)

GLIZMANENKO, Dmitriy L'vovich; SHUR, D.S., redaktor; EGGERT, A.P.
     tekhnicheskiy redaktor.

     [Welding and cutting of metals] Svarka i.rezka metallov. Izd.
     3-e perer. i dop.Moskva, Vses.uchebno-pedagog.izd-vo Trudrezerv-
     izdat.1955. 431 p.   (MLRA 8:9)
          (Welding)   (Metal cutting)

SEVER'YANOV, Aleksandr Arkad'yevich; RZHAVINSKIY, V.V., redaktor; SHUR,
    D.S., redaktor; KUZ'MIN, D.G., tekhnicheskiy redaktor

    [A collection of problems and exercises for a general course for
    mechanics] Sbornik zadach i uprazhneniy po obshchemu kursu slesarno-
    go dela. Izd. 2-oe, perer. i dop. Moskva, Vses. uchebno-pedagog.
    izd-vo Trudrezervizdat, 1956. 77 p.   (MIRA 9:8)
            (Machine-shop practice)

O

MEDVEDYUK, N.I.; STEPANOV, A.G.; TIKHONOV, V.I.,nauchnyy redaktor;
SHUR, D.S.,redaktor; KUZ'MIN, D.G.,tekhnicheskiy redaktor

[Copper and tinsmithing] Mednitskie i zhestianitskie raboty.
Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1956.
271 p.   (MLRA 10:4)
          (Coppersmithing) (Tinsmithing)

SLEPININ, Vladimir Aleksandrovich; LEVINSON, Semen Yakovlevich;
    SHUR, D.S.,redaktor; KUZ'MIN, D.G.,tekhnicheskiy redaktor

    [Collection of problems and exercises in lathe work] Sbornik
    zadanii i uprazhnenii po tokarnomu delu. Izd. 2-oe, perer. i
    dop. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat,
    1956. 280 p.   (MLRA 10:4)
            (Turning)

ALEKIN, Lev Yemel'yanovich; GLADILIN, Anatoliy Nikolayevich; KRASAVIN,
    Vasiliy Stepanovich; LUNEV, Fedor Andreyevich; MAKAROVA, Vera
    Ivanovna; RASTORGUYEV, Ivan Sergeyevich; KHRENOV, Aleksey Dmi-
    triyevich; TSEYTLIN, V.Z., kandidat tekhnicheskikh nauk, redak-
    tor, RZHAVINSKIY,V.V., inzhener; redaktor; SHUR, D.S., redaktor;
    EGGERT, A.P., tekhnicheskiy redaktor.

    [General technology of metals] Obshchaia tekhnologiia metallov.
    Moskva, Vse.uchebno-pedagog.izd-vo Trudrezervizdat, 1956. 327 p.
                    (Metals)

BRUSHTEYN, Boris Yefimovich; DEMENT'YEV, Vladimir Ivanovich; RZHAVINSKIY,
V.V., inzhener, redaktor; SHUR, D.S., redaktor; OSTRIROV, N.S.,
tekhnicheskiy redaktor

[Turning] Tokarnoe delo. Izd.4-oe, perer. i dop. Moskva, Vses.
uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 490 p.   (MLRA 9:7)
(Turning)

GLIZMANENKO, Dmitriy L'vovich,; LETNEV, B.Ya., nauchnyy red.; SHUR, D.S., red.;
MATUSEVICH, N.L., tekhn. red.

[Gas welding and cutting] Gazovaia svarka i rezda metallov. Izd. 3.,
perer. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1957.
226.   (MIRA 11:11)

(Gas welding and cutting)

TSEGEL'SKIY, Vladimir Leopol'dovich; LETHEV, B.Ya., nauchnyy redaktor;
SHUR, D.S., redaktor; RAKOV, S.I., tekhnicheskiy redaktor.

[Electric arc welding] Elektrodugovaia svarka. Moskva, Vses.
uchebno-pedagog.izd-vo Trudrezervizdat, 1957. 226 p. (MIRA 10:11)
(Electric welding)

SOKOLOV, Ivan Georgiyevich; LETNEV, B.Ya.,nauchnyy redaktor; SHUR, D.S.,
        redaktor; OSTRIROV, N.S., tekhnicheskiy redaktor.

        [Handbook for the young foundry worker; on hammer forging] Spravochnik
        molodogo kuznetsa; po svobodnoi kovke. Izd.2-oe, perer. i dop. Moskva,
        Vses.uchebnopedagog.izd-vo Trudrezervizdat, 1957. 431 p.
                                                            (MIRA 10:5)
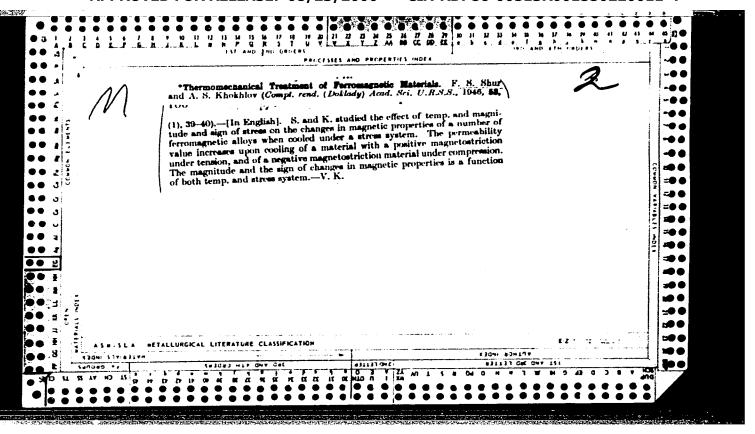   (Forging)

SHUR, E.F.

Dynamics of the accumulation of the grass mass in Alpine meadows
with ladysmantle (Alchemilla caucasica Bus.). Izv.AN Arm.SSR.Biol.i
sel'khoz.nauki 6 no.11:85-90 '53.   (MLRA 9:8)

1. Institut kormodobyvaniya Ministerstva sel'skogo khozyaystva
Armyanskoy SSR.
        (Kotaykskiy District--Pastures and meadows) (Ladysmantle)

PROCESSES AND PROPERTIES INDEX

*Thermomechanical Treatment of Ferromagnetic Materials. F. S. Shur and A. S. Khokhlov (*Compt. rend. (Doklady) Acad. Sci. U.R.S.S.*, 1946, **53**, (1), 39–40).—[In English]. S. and K. studied the effect of temp. and magnitude and sign of stress on the changes in magnetic properties of a number of ferromagnetic alloys when cooled under a stress system. The permeability value increases upon cooling of a material with a positive magnetostriction under tension, and of a negative magnetostriction material under compression. The magnitude and the sign of changes in magnetic properties is a function of both temp. and stress system.—V. K.

A S M - S L A   METALLURGICAL LITERATURE CLASSIFICATION

SHUR, G. (g. Gomel')

Youth takes up the baton. Sov.torg. 35 no.2:32-34 F '62.
(MIRA 15:1)
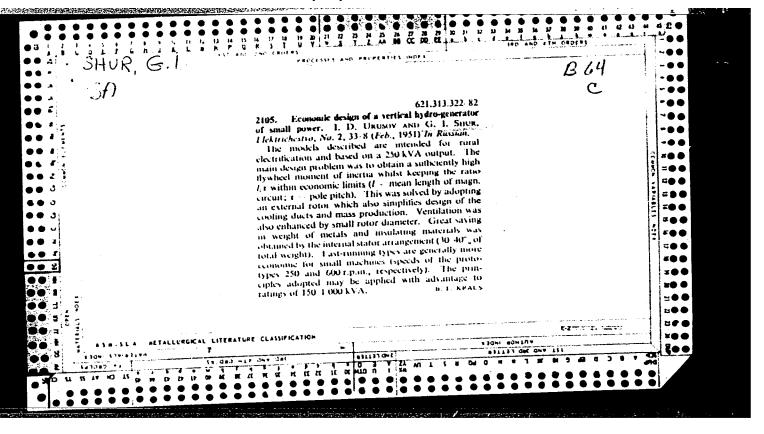
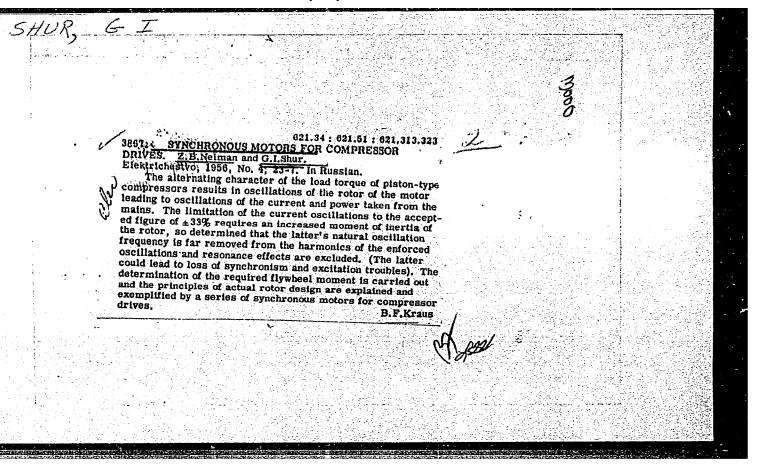(Gomel—Shoe industry)

SHUR, G.

Eight years without medium repairs. Blek.agit.ved.transp.
ne.22:31-34 N '55.   (MLRA 9:1)

1.Starshiy mekhanik teplekheda "Khasyan" Dunayskoge parekhed-
stva.
                    (Ships--Maintenance and repairs)

SHUR, G.I

621.313.322-82

2105.   Economic design of a vertical hydro-generator of small power. I. D. URUSOV AND G. I. SHUR. *Elektrichestvo*, No. 2, 33-8 (Feb., 1951) *In Russian*. The models described are intended for rural electrification and based on a 250 kVA output. The main design problem was to obtain a sufficiently high flywheel moment of inertia whilst keeping the ratio *l*, *r* within economic limits (*l* - mean length of magn. circuit; *r* - pole pitch). This was solved by adopting an external rotor which also simplifies design of the cooling ducts and mass production. Ventilation was also enhanced by small rotor diameter. Great saving in weight of metals and insulating materials was obtained by the internal stator arrangement (30-40% of total weight). Fast-running types are generally more economic for small machines (speeds of the prototypes 250 and 600 r.p.m., respectively). The principles adopted may be applied with advantage to ratings of 150-1 000 kVA.   H. I. KRAUS

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

SHUR, G I

621.34 : 621.51 : 621.313.323

38673 SYNCHRONOUS MOTORS FOR COMPRESSOR
DRIVES.   Z.B.Neiman and G.I.Shur.
Elektrichestvo, 1956, No. 4, 23-7. In Russian.
    The alternating character of the load torque of piston-type
compressors results in oscillations of the rotor of the motor
leading to oscillations of the current and power taken from the
mains. The limitation of the current oscillations to the accept-
ed figure of ±33% requires an increased moment of inertia of
the rotor, so determined that the latter's natural oscillation
frequency is far removed from the harmonics of the enforced
oscillations and resonance effects are excluded. (The latter
could lead to loss of synchronism and excitation troubles). The
determination of the required flywheel moment is carried out
and the principles of actual rotor design are explained and
exemplified by a series of synchronous motors for compressor
drives.
                                                   B.F.Kraus

AUTHOR: Gol'denberg, S.I. (Engineer) & Shur, G.I. (Engineer)   SOV/110-58-10-13/24

TITLE: Problems in the design of hydro-alternator damping windings.
            (Voprosy konstruirovaniya dempfernykh obmotok gidrogeneratorov)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, No.10. pp. 51-54 (USSR)

ABSTRACT: A hydro-alternator commonly has damper windings; they are difficult
            to design because they are at the periphery of the poles where the
            speed is highest, and are commonly made of copper. This is not a
            strong material at the best of times, and is liable to have been
            softened by brazing operations during assembly. Although the range of
            size and speed of hydro-alternators is very wide, in practical cases
            it is only necessary to consider five typical constructions of damper
            winding, which are discussed in the present article. The authors
            propose criteria for the selection of the best design in any
            particular case with the least waste of time. The mechanical load on
            the damper winding depends, of course, on the generator overspeed, the
            number of poles and the diameter; these factors were employed in
            formulating the criteria. The first criterion gives the radial
            thickness of the damper segment as a function of the mechanical load
            on the overhung part of the segment. Expressions are then derived
            for the weight of the overhung part and for the centrifugal forces
            acting upon it. An expression is also given for the rigidity of the
            section and finally an expression for the radial thickness of a
            rectangular section is derived. The segment is commonly mounted on

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Problems in the design of hydro-alternator damping windings.   SOV/110-58-10-13/24

edge if the thickness is greater than 1 cm (Figs.2 - 5) otherwise it is laid flat (Fig.1.). Fig.6. may be used to help in selecting the arrangement of the segment, it is constructed for a thickness of 1 cm, points lying to the left of the curve corresponding to a damper segment laid flat and those to the right, on edge. Cases in which the damper segment is supported only by the damper bars are illustrated in Figs.2 - 5. The second criterion characterises the magnitude of the centrifugal force of the segment and of the jumper per unit length of pole arc. It is used in selecting the method of fixing the segment. Usually the section of the damper segment is half the total section of the damper bars on a pole, which approximately proportional to the pole pitch. Therefore, the weight of the damper segment and jumper are proportional to the square of the pole pitch. An expression is given for the centrifugal force on a damper segment and a new parameter is introduced that is proportional to this force. Permissible ranges of this parameter are then stated. When the damper winding may get very hot, for instance because there is a rectifier load, the construction of Fig.5. is preferable to Fig.4. Various special features of damper winding design are then considered. The different constructions of jumper that are used are illustrated in Fig.7. and the method of selection in particular cases is described. The jumpers are secured by ordinary steel bolts with zinc-plated steel washers. The designs

Card 2/3

Problems in the design of hydro-alternator damping windings. SOV/110-58-10-13/24

of damper winding that have been considered are intended for use in hydro-alternators that do not employ a synchronous starting. When a synchronous starting is used the damper winding gets very hot and allowance must be made for expansion effects. There are 7 figures.

SUBMITTED: July 16, 1957

1. Generators--Design   2. Generators--Properties   3. Copper wire --Effectiveness   4. Mathematics

Card 3/3

SHMETER, S.M.; SHUR, G.N.

     Electrometeorograph for observations by airplanes. Trudy TSAO no.22:
3-8 '57.   (MIRA 11:4)
        (Meteorological instruments)   (Aeronautics in meteorology)

SHUR, G.N.

Determining vertical velocities of turbulent gusts during observations from airplanes. Trudy TSAO no.22:9-16 '57.   (MIRA 11:4)
(Winds) (Meteorological instruments) (Aeronautics in meteorology)

80789

AUTHOR: Shur, G.N.

TITLE: A Method and Device for Determining Certain Characteristics of
             Atmospheric Turbulence by Aircraft

ABSTRACT: The author suggests a method of computing automatically the
             vertical wind pulsations with the aid of an electrointegrator,
             using the load factor of an aircraft as a basis. The electric
             circuit (a passive electric network) is discussed. It may be
             used for numerical calculations of the vertical wind pulsations
             from the formulae $W = a\Delta n$, $W = v_z + b\Delta n$, where W is the
             vertical wind velocity in m/sec, v_z is the vertical velocity
             of the center of gravity of the aircraft in m/sec, Δn is the
             vertical load factor of the aircraft in fractions of g, a and b
Card 1/2   are certain constants depending on the aircraft characteristics

80789

SOV/169-59-6-5971

A Method and Device for Determining Certain Characteristics of Atmospheric Turbulence by Aircraft

height and velocity of flight. The author shows that, based on the load factor of the aircraft, more precise data on the vertical wind velocity can be obtained, when using an amplifier with negative derivative feedback in the integrator circuit. The method suggested will eliminate the cumbrous numerical calculations necessary for obtaining vertical wind pulsation data from the accelerograph records.

S. P. Khachatryan

Card 2/2

PHASE I BOOK EXPLOITATION   SOV/4292

Tsentral'naya aerologicheskaya observatoriya

Trudy, vyp. 31 (Transactions of the Central Aerological Observatory, No.31)
    Moscow, 1959. 91 p. 650 copies printed.

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy
    sluzhby.

Ed.: (Title page): S.M. Shmeter; Ed. (Inside book): M.I. Sorokina;
    Tech. Ed.: T. Ye. Zemtsova.

PURPOSE: This publication is intended for aerologists and aircraft instrument
    designers.

COVERAGE: This collection of 11 articles deals mainly with the problem of finding
    the best method of measuring atmospheric turbulence from aircraft. A detailed
    description of the aerological instruments used for this purpose is given.
    Wind observations by means of radio theodolite is discussed. References accom-
    pany individual articles.

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Transactions of the Central Aerological Observatory, No.31   SOV/4292

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Transactions of the Central Aerological Observatory, No. 31   SOV/4292

AVAILABLE: Library of Congress

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JA/dwm/mas
10-13-60

31306
S/124/61/000/010/041/056
D251/D301

IO 6300

AUTHOR: Shur, G.N.

TITLE: Obtaining the true form of an individual turbulent
              gust on the overload of an aircraft

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 10, 1961, 99,
              abstract 10 B684 (Tr. Tsentr. aerol. observ. 1960,
              no. 34, 96, 103)

TEXT: A method is given for obtaining the distribution of
the vertical velocity of the wind in a single gust along the trajec-
tory of an aircraft. On the continuous record of the vertical over-
load a position is chosen where a single gust is described. By means
of a magnetophone this position is reproduced many times, decoded,
and applied to a frequency analyzer on whose input the transitional
transmission frequency of the given aircraft is electrically intro-
duced. The result gives the modulus of the spectrum of vertical
overload. The phase spectrum is calculated from the obtained ampli-

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Obtaining the true form...

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31306
D251/D301

tude-frequency on the basis of Bode's theorem by numerical methods.
Knowledge of the complete spectrum may be obtained by means of the
Fourier transformation of the original process with respect to time
on the distribution of the vertical velocity along the trajectory.
If the automation of the series of numerical operations is not con-
sidered, this method is connected with complex calculations and the
carrying out of graphical operations. /Abstracter's note: Complete
translation_/

Card 2/2

SHUR, G. N.

Cand Phys-Math Sci - (diss) "Experimental studies of turbulency
in the free atmosphere with the aid of airplanes." Leningrad,
1961. 11 pp; (Main Geophysical Observatory imeni A. I. Voyeykov,
GUGMS under the Council of Ministers USSR, Central Aerological
Observatory GUGMS under the Council of Ministers USSR); 200 copies;
price not given; (KL, 10-61 sup, 206)

SHUR, G. N.

Experimental studies of the energy spectrum of atmospheric turbulence.
Trudy TSAO no.43:79-90 '62.   (MIRA 15:7)
                (Atmospheric turbulence)

BELYAYEV, V.P.; SHUR, G.N.

Turbulence measurement at high altitudes by means of sounding
balloons. Trudy TSAO no.43:91-98 '62.   (MIRA 15:7)
          (Atmospheric turbulence) (Radiosondes)

PINUS, N.Z., doktor fiz.-matem. nauk, prof.; SHUR, G.N., kand. fiz.-matem. nauk; VINNICHENKO, N.K.; CHERNYGH, V.I.

Basic principles of the automatization of processing airplane meteorological information. Meteor. i gidrol. no.9:3-9 '64.

1. TSentral'naya aerologicheskaya observatoriya.

L 10415-65   EWT(1)/FCC   ASD(f)-2/AFETR/ESD(t)   GW

ACCESSION NR: AT4045514   S/2789/64/000/053/0043/0053

AUTHOR: Shur, G. N.   B

TITLE: Spectral structure of turbulence in the free atmosphere as indicated by aircraft investigations

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy*, no. 53, 1964. Dinamika atmosfery* (Atmospheric dynamics), 43-53

TOPIC TAGS: atmospheric turbulence, meteorology, aviation meteorology, turblent gust, air turbulence spectral structure, aircraft bumping

ABSTRACT: On the basis of an analysis of experimental data obtained during a study of turbulence aboard a TU-104 aircraft, the author discusses the energy spectrum of the vertical component of the velocity of turbulent gusts in a temperature-stratified atmosphere. The article also presents information on the relation between the spectra of the vertical and horizontal components in the case of a stably stratified atmosphere. It is shown that it is possible to determine the dispersion of velocities of turbulent gusts in a broad range of scales using data obtained from measurements of overloads in a narrow range of frequencies (wave numbers). The following are discussed in detail: 1) spectral characteristics of the vertical component of turbulent pulsations of wind velocity; 2) the relations between the

Card 1/3

L 10415-65

ACCESSION NR: AT4045514

energy spectra of the vertical and horizontal components of pulsating wind velo-
city; 3) determination of the integral characteristics of turbulence in a broad
range of scales, using data on overloads in a narrow range of frequencies. This de-
tailed consideration reveals that the form of the spectrum of the vertical component
of the velocity of turbulent gusts is dependent on atmospheric stratification. A
model proposed in this article is in good agreement with experimental data and
theoretical conclusions obtained by other investigators. The spectral curve of the
horizontal component obtained by the author, however, is in need of experimental
confirmation. The author has obtained experimental confirmation of the previously
established fact that there is a coincidence of the turbulence spectrum at scales
up to 600-1,000 m and the "-2/3 law"; this has made it possible to obtain a simple
solution of the problem of determining the dispersion of velocities of gusts. It
is noted that a further study should be made of deviations of the curves of spectral
density from the "-2/3 law" in the region of large scales. In such a study spectral
measurements must be accompanied by correction measurements of the thermodynamic
parameters of the free atmosphere, especially the gradients of these parameters.
Determination of the relationships between the averaged characteristics of the tem-
perature and wind fields and the spectral characteristics of the fluctuations of
these fields will make it possible to better understand certain problems in the
dynamics and energy of the atmosphere. "In conclusion the author wishes to thank
M. M. Kulik, A. F. Yepishev, V. S. Aleksandrov, N. A. Titov, and V. V. Kozlov.
Card 2/3

L 10415-65
ACCESSION NR: AT4045514   2

specialists of the GosNII GVF, for organizing and carrying out the complex flight
experiment." Orig. art. has: 16 formulas and 4 figures.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological
Observatory)

SUBMITTED: 00   ATD PRESS: 3116   ENCL: 00

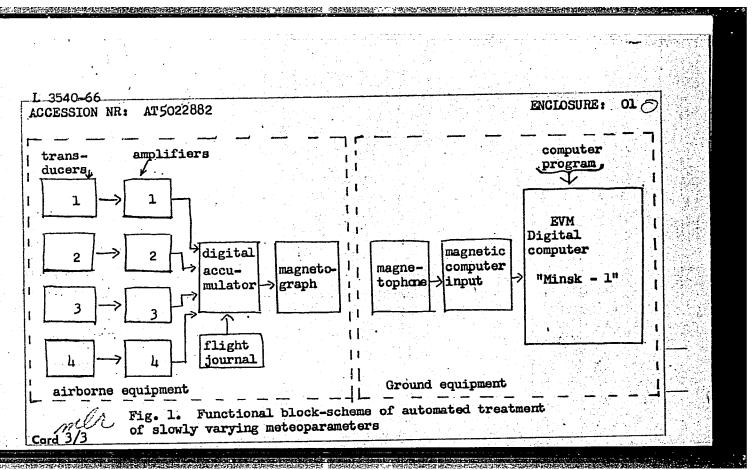SUB CODE: ES   /   NO REF SOV: 007   OTHER: 001

Card   3/3

BELYAYEV, V.P.; BELTADZE, T.G.; LITOVCHENKO, V.P.; LITVINOVA, V.D.;
      LOMINADZE, V.P.; PINUS, N.Z.; SOFIYEV, Ye.M.; SHUR, G.N.

Some results of experimental investigations of atmospheric
turbulence using radiosondes. Trudy TSAO no.54:4-52 '64.
                                        (MIRA 17:6)

L 3540-66   EWT(d)/EWT(1)/EEC(k)-2/FCC/EWP(1)   IJP(c)   BB/GG/GW

ACCESSION NR: AT5022882

UR/2789/65/000/063/0077/0084
551.508

AUTHORS: Vinnichenko, N. K.; Pinus, N. Z. (Doctor of physico-mathematical sciences); Chernysh, V. I.; Shur, G. N.

TITLE: Principles of automatic treatment of aeroplane meteoinformation

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 63, 1965. Voprosy dinamiki atmosfery (Problems of atmospheric dynamics), 77-84

TOPIC TAGS: airborne data processor, airborne equipment, meteorological phenomenon, meteorology, infrasonic spectrometry

ABSTRACT: To expedite the analysis of meteorological information gathered by an aeroplane, the authors developed an integrated method for treating such data, employing digital and analog computers, an electronic analyzer of stationary random processes, and an infrasonic spectrometer. Block-diagrams for the treatment of slowly varying meteoparameters and pulsating parameters are presented. (see Fig. 1 on the Enclosure). It is concluded that with the aid of the digital computer it should be possible to make certain selections and to perform the

Card 1/3

L 3540-66

ACCESSION NR: AT5022882   *3*

interpolation and extrapolation of the gathered experimental data. Orig. art.
has: 2 graphs.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological
Observatory) 44,55

SUBMITTED: 00   ENCL: 01   SUB CODE: ES

NO REF SOV: 008   OTHER: 000

Card 2/3

L 3540-66
ACCESSION NR: AT5022882   ENCLOSURE: 01

Fig. 1. Functional block-scheme of automated treatment
of slowly varying meteoparameters

Card 3/3

L 5057-66   EWT(d)/EWT(1)/FCC/EWP(1)   IJP(c)   BB/GG/GW

ACC NR: AT5022884   SOURCE CODE: UR/2789/65/000/063/0096/0103

AUTHOR: Vinnichenko, N. K.; Shur, G. N.

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Multichannel airborne code converter

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 63, 1965. Voprosy dinamiki atmosfery (Problems of atmospheric dynamics), 96-103

TOPIC TAGS: airborne equipment, pulse modulation, pulse coding, pulse rate, frequency converter

ABSTRACT: A multichannel airborne code converter has been designed for continuous synchronous pulse-frequency coding of time-varying meteorological parameters in a form suitable for magnetic recording. Circuit design and construction of the device are described in considerable detail. Laboratory tests have shown that the time constant does not exceed 0.005 sec, even though the circuits of some channels, particularly channels 1—5, have inertial elements. In the frequency range employed, even the first five channels are practically inertialess. The dependence of channel output frequency on input signal voltage is also practically linear. Thus, despite the essentially nonlinear operation of pulse-frequency modulation, the device is linear and inertialess, and random signals (time-varying parameters) passing through the code converter do not change their statistical characteristics. Total conversion error for

Card 1/2   UDC: 551.508

L 5057-66

ACC NR: AT5022884

each channel under static conditions does not exceed ±2% with a supply voltage fluc-
tuation of ±6%. Orig. art. has: 2 figures and 1 formula.   [04]

SUB CODE: ES, DP/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 000/ ATD PRESS:

Card 2/2

L 20967-66   EWT(1)/FCC   GW

ACCESSION NR: AT5022885

UR/2789/65/000/063/0104/0108
551.508

AUTHOR: Shur, G. N.

TITLE: A universal self-balancing bridge for an airborne resistance thermometer

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 63, 1965.
Voprosy dinamiki atmosfery (Problems of atmospheric dynamics), 104-108

TOPIC TAGS: airborne equipment, resistance thermometer, self adaptive control,
temperature measurement, measuring instrument / EM TSAO electric mediograph,
DID 0.5 two phase induction motor

ABSTRACT: A universal self-balancing bridge was constructed for measuring air
temperatures in an airplane, using a resistance thermometer. The device has a
linear characteristic, sufficient power output to operate a digital magnetic
recorder, and eliminates many of the problems associated with the unbalanced
bridge. The null element of the bridge is an electronic amplifier with a high
input resistance and sensitivity, permitting the system to operate on small cur-
rents and reducing the heating problem. A highly stable power supply is not re-
quired. In Fig. 1 on the Enclosure, R_t is the resistance thermometer, R_1 and R_2
Card 1/3

L 20967-66

ACCESSION NR: AT5022885

resistors, and the fourth leg contains a potentiometer R_{p1} and an adjustment resistor R_u connected in series. When the bridge is unbalanced, a voltage is sent to the input of the servoamplifier (SU) which controls the DID-0.5 two-phase induction motor. This motor moves the slide of R_{p1}, restoring the balance. A second potentiometer R_{p2} (on a common axis with R_{p1}) can supply the voltage for the automation system. R_2 and R_u permit the adjustment of the midpoint temperature to any desired value, and the thermometer will read to 50C above or below this value. Direct amplification of the DC voltages is not feasible. Laboratory tests (with a resistance box replacing the R_t) show that the instrument's sensitivity = $\pm$ 0.12C, the correction time for self-balancing with a 2C step change in temperature is 1 sec, and the maximum random error is < $\pm$ 0.5%. Orig. art. has: 2 figures and 7 formulas.

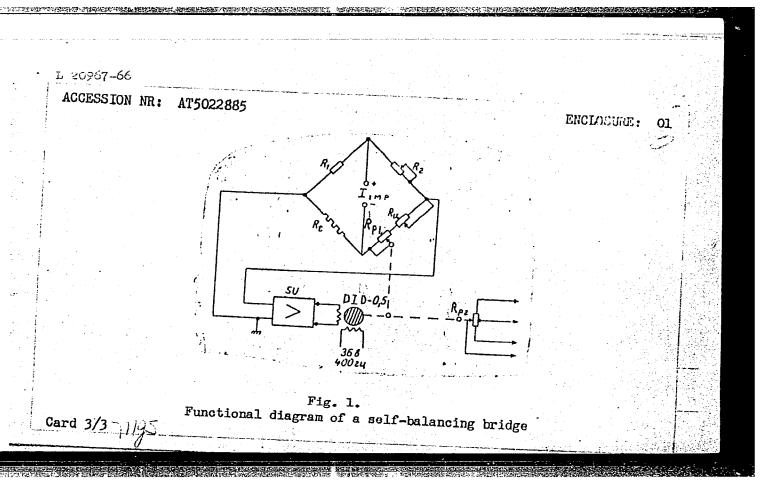ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

SUBMITTED: 00   ENCL: 01   SUB CODE: ES, TD

NO REF SOV: 004   OTHER: 000

Card 2/3

Fig. 1.
Functional diagram of a self-balancing bridge

Card 3/3

L 11323-67   EWP(k)/EWT(d)/EWP(h)/EWP(l)/EWP(v)

ACC NR: AR6017632   SOURCE CODE: UR/0272/66/000/001/0110/0110

AUTHOR: Shur, G. N.

TITLE: A universal self-balancing bridge for an aircraft resistance thermometer

SOURCE: Ref. zh. metrol. i izmerit. tekhn., Abs. 1.32.838

REF SOURCE: Tr. Tsentr. aerod. observ., vyp. 63, 1965, 104-108

TOPIC TAGS: resistance thermometer, resistance bridge, auxiliary aircraft equipment

ABSTRACT: The author proposes a universal self-balancing bridge designed for measuring ambient temperature of an aircraft in view of the considerable error involved in automatic registration and analysis of measurement results in the most widely used unbalanced bridge design. The proposed balanced-bridge or zero measurement method is based on compensation of imbalance in the measurement diagonal of the bridge by changing the resistance of one of the arms when the resistance of the temperature gauge changes. A functional circuit is described for this type of balanced bridge with automatic zero compensation. A schematic diagram of the instrument is given together with its operating principle. The device requires a 115 vac 40 cps power supply, has a bridge sensitivity of ±0.12°C, linear characteristics and a rather low power output so that it can be used in a digital magnetic recording system for moderate temperatures. The maximum random error of the instrument with regard to the class of accuracy of the potentiometer used is less than ±0.5%. [Translation of abstract]

SUB CODE: 13, 09, 01

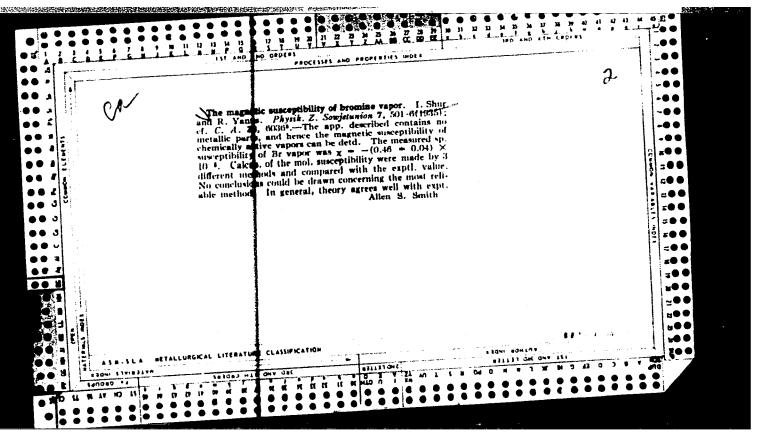Card 1/1 bab   UDC: 389:536.531:621.317.733:629.135.2
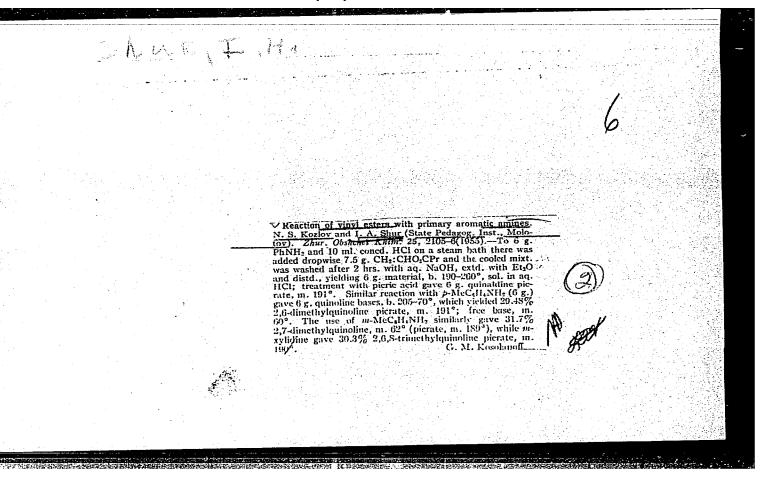
SHUR, I.

First stage. Kryl. rod. 16 no.9:16   S '65.

(MIRA 18:12)

1. Starshiy instruktor Saratovskogo oblastnogo komiteta
Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya armii,
aviatsii i flotu SSSR.

The magnetic susceptibility of bromine vapor. I. Shur and R. Yanus. *Physik. Z. Sowjetunion* 7, 501-6(1935); cf. C. A. 29, 6030[?].—The app. described contains no metallic parts, and hence the magnetic susceptibility of chemically active vapors can be detd. The measured sp. susceptibility of Br vapor was $x = -(0.46 \pm 0.04) \times 10^{-6}$. Calcn. of the mol. susceptibility were made by 3 different methods and compared with the exptl. value. No conclusions could be drawn concerning the most reliable method. In general, theory agrees well with expt.

Allen S. Smith

∨ Reaction of vinyl esters with primary aromatic amines.
N. S. Kozlov and I. A. Shur (State Pedagog. Inst., Molo-
tov). Zhur. Obshchei Khim. 25, 2105–6(1955).—To 6 g.
PhNH₂ and 10 ml. concd. HCl on a steam bath there was
added dropwise 7.5 g. CH₂:CHO₂CPr and the cooled mixt.
was washed after 2 hrs. with aq. NaOH, extd. with Et₂O
and distd., yielding 6 g. material, b. 190–260°, sol. in aq.
HCl; treatment with picric acid gave 6 g. quinaldine pic-
rate, m. 191°. Similar reaction with p-MeC₆H₄NH₂ (6 g.)
gave 6 g. quinoline bases, b. 205–70°, which yielded 29.48%
2,6-dimethylquinoline picrate, m. 191°; free base, m.
60°. The use of m-MeC₆H₄NH₂ similarly gave 31.7%
2,7-dimethylquinoline, m. 62° (picrate, m. 189°), while m-
xylidine gave 30.3% 2,6,8-trimethylquinoline picrate, m.
190°.   G. M. Kosolapoff

KOZLOV, N.S., (Molotov); SHUR, I.A., (Molotov).

Method for teaching the phenomenon of isomerism in a secondary
school. Khim.v shkole 11 no.5:40-42 S-O '56.   (MLRA 9:11)
        (Isomers--Study and teaching)

SHUR, I., professor.

      Utilizing the energy of radioactive radiation for sterilizing meat
and meat products. Mias.ind.SSSR 27 no.2:60-63 '56.   (MLRA 9:8)
                 (Meat--Sterilization)

5(3)
AUTHORS: Kozlov, N. S., Shur, I. A.

TITLE: Catalytic Synthesis of 4-Methyl-2-Phenyl-5,6-Benzoquinoline
             and 2,4-Diphenyl-5,6-Benzoquinoline and Their Derivatives
             (Kataliticheskiy sintez 4-metil-2-fenil-5,6-benzokhinolina i
             2,4-difenil-5,6-benzokhinolina i ikh proizvodnykh)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 102-104
             (USSR)

ABSTRACT: It is known that 5,6-benzoquinoline and its derivatives are
             produced by means of methods of synthesis commonly used for
             quinoline compounds (Ref 1). But even the most simple compound
             amongst them (Döbner(Debner) method, Refs 2, 3) cannot be
             regarded as perfect since the 2 steps of reaction reduce the
             yield and complicate the operation. Some further, previously
             developed methods (Refs 4-7) are insufficient as well. The
             5,6-benzoquinoline nucleus is a constituent of the
             physiologically active ergot alkaloid and other plants. It
             might therefore be assumed that several derivatives of the
             5,6-benzoquinoline ought to possess bactericidal properties.

Card 1/3

Catalytic Synthesis of 4-Methyl-2-Phenyl-5,6-   SOV/20-123-1-27/56
Benzoquinoline and 2,4-Diphenyl-5,6-Benzoquinoline and Their Derivatives

For that reason, the synthesis under review is of scientific
and practical interest. In performing the present study the
authors were led by theoretical conceptions which were already
earlier reported by the first mentioned author (Ref 8). The
present tests have confirmed the correctness of the mentioned
assumptions. The Schiff bases from 2-naphthylamine and from
aromatic aldehydes (benzaldehyde, aubepine, m- and p-nitro-
benzaldehyde, p-dimethyl-amino benzaldehyde) actually react
under adequate conditions with acetone and acetophenone and
produce the two compounds mentioned in the title and their
p-methoxy-, p-dimethylamino- as well as i- and p-nitro
derivatives. Most of these compounds were obtained by the
authors for the first time. As active catalyst 2-naphthyl-
amine hydrochloride was used. The mechanism of the reaction is
illustrated by schemes and equations. It was also experimentally
confirmed. For this purpose, the authors have elaborated a
modification of the synthesis of β-2-naphthyl-amino-β-phenyl-
propiophenone. The latter was subjected to cyclization and
formed 1,3-diphenyl-5,6-benzoquinoline. Finally the method

Card 2/3

Catalytic Synthesis of 4-Methyl-2-Phenyl-5,6-   SOV/20-123-1-27/56
Benzoquinoline and 2,4-Diphenyl-5,6-Benzoquinoline and Their Derivatives

           is described. There are 1 table and 10 references, 4 of which
           are Soviet.

ASSOCIATION: Permskiy sel'skokhozyaystvennyy institut
              (Perm‼ Institute of Agriculture)

PRESENTED: June 14, 1958, by A. A. Balandin, Academician

SUBMITTED: April 24, 1958

Card 3/3

5(5)
AUTHORS: Kozlov, N. S., Shur, I. A.

TITLE: Catalytic Condensation of the Schiff Bases With Organic
                Compounds. I. Synthesis of β-Arylaminoketones and Their Hydra-
                mine Cleavage

ABSTRACT: Taking into consideration the inadequately worked out syntheses
                and properties of the β -aminoketones according to references
                1-5, the authors describe in the present paper a very convenient
                method for the synthesis of the β -arylaminoketones which is
                based on the reaction of the Schiff bases with aliphatic-aro-
                matic ketones in the presence of an acid catalyst(the hydro-
                chloride amine contained in the Schiff base):

$$ArN = CHAr' + RCOCH_3 \longrightarrow ArNHCHAr'$$
$$CH_2COR$$

                By this way a number of new compounds belonging to this class
                could be synthesized. The assumption repeatedly found in publi-

Card 1/2

Catalytic Condensation of the Schiff Bases With Organic   SOV/79-29-8-58/81
Compounds.I. Synthesis of β-Arylaminoketones and Their Hydramine Cleavage

cations that the β-aminoketones easily cyclize into the
respective quinoline bases according to scheme 2 (Ref 1) holds
in the case of Ar= β-naphthylamine only. In the case of
Ar=phenyl the cyclization of the β-arylaminoketones is subjected
to a hydramine cleavage (Refs 4,6,7). Attempts aiming at a
cyclization of the β -arylaminoketones synthesized by the
authors by means of melting them down with zinc chloride and
heating them with hydrochloric acid did not succeed, since during
the heating process a decomposition into the primary amine and
benzalacetophenone takes place (Scheme 3). This process is
interpreted and more thoroughly explained by means of formula
(A) as a consequence of a weakening of the $-NH-CH-C_6H_8$ bond in
the molecule of β -arylaminoketone due to polarization. There
are 2 tables, and 8 references, 4 of which are Soviet.

ASSOCIATION: Permskiy gosudarstvennyy sel'skokhozyaystvennyy institut (Perm'
State Agricultural Institute)

SUBMITTED: November 4, 1958

Card 2/2

S/153/60/003/004/022/040/XX
B020/B054

AUTHORS: Kozlov, N. S., Shur, I. A.

TITLE: The Mechanism of Synthesis of 2-Phenyl-5,6-benzoquinoline
             and Its Derivatives

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i
             khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4,
             pp. 675 - 679

TEXT: One of the authors developed (Refs.3,4) a new method of syn-
thesizing the compound mentioned in the title and its derivatives by
means of co-condensation of 2-naphthyl amine with aromatic aldehydes
and acetylene. This synthesis is based on the concept of an interaction
of two Schiff's bases forming in the process, and on the cyclization of
the resulting intermediate into the α-position of the naphthalene
nucleus. On the basis of these concepts, the authors succeeded in syn-
thesizing the compound mentioned in the title and its derivatives by a
method developed by them in two variants. The first variant is based
on the condensation of Schiff's bases obtained from 2-naphthyl amine

Card 1/3

The Mechanism of Synthesis of
2-Phenyl-5,6-benzoquinoline and Its
Derivatives

S/153/60/003/004/022/040/XX
B020/B054

and aromatic aldehydes with ketones to form β-aminoketones. The second
variant is based on the condensation of Schiff's bases with aldehydes
containing mobile hydrogen atoms to form β-amino aldehydes. Both re-
actions proceed in the presence of 2-naphthyl-amine chlorohydrate. Very
different derivatives of 2-phenyl-5,6-benzoquinolinol can be obtained
by introduction of homologs and derivatives of acetone and acetophenone
instead of the latter together with Schiff's bases, as well as other
aldehydes instead of acetaldehyde. Another possibility of synthesizing
the compound mentioned is based on the condensation of 2-naphthyl amine
with unsaturated ketones and diketones. The authors describe the prod-
ucts obtained in the condensation of 2-naphthyl amine with benzal
acetone, dibenzoyl methanol, and benzal acetophenone, and derive the
reaction mechanism. They describe the synthesis of the following com-
pounds: 2-phenyl-5,6-benzoquinoline, 4-methyl-2-phenyl-5,6-benzo-
quinoline, β-(2-naphthyl-amino)-β-phenyl propiophenone, 2,4-di-
phenyl-5,6-benzoquinoline, 2-(3-nitro-phenyl)-4-phenyl-5,6-benzo-
quinoline, and 2-(4-nitro-phenyl)-4-phenyl-5,6-benzoquinoline, as well
as the cyclization of β-(2-naphthyl-amino)-β-phenyl propiophenone to

Card 2/3

KOZLOV, N.S.; SHUR, I.A.

Catalytic condensation of Schiff bases with methyl-p-tolyl ketone.
Part 6. Zhur.ob.khim. 30 no.8:2492-2496 Ag '60. (MIRA 13:8)

1. Permskiy sel'skokhozyaystvennyy institut.
    (Schiff bases)   (Ketone)

KOZLOV, N.S.; SHUR, I.A.

Catalytic condensation of Schiff bases with organic substances.
Part 3: Mechanism of the synthesis of β-arylamino ketones.
Zhur.ob.khim. 30 no.8:2746-2748 Ag '60.   (MIRA 13:8)

1. Permskiy sel'skokhozyaystvennyy institut.
        (Schiff bases)   (Ketones)

BOGORODSKAYA, M.T., inzh.; SHUR, I.A., inzh.

Study of the operation of injection slotted burners in the L-1 and
L-2 water heaters. Sbor. rab.Lengiproinzhproekta:51-56 O '61.
(MIRA 18:1)

KOZLOV, N.S.; SHUR, I.A.

Catalytic condensation of Schiff bases with nethyl-α-naphthyl ketone.
Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.4:614-616 '61.
(MIRA 15:1)

1. Fermskiy sel'skokhozyaystvennyy institut, kafedra khimii.
(Schiff bases) (Ketone)

KOZLOV, N.S.; SHUR, I.A.

Synthesis of β-arylamino ketones and their hydramine cleavage.
Izv.vys.ucheb.zav.;khim.i khim.tekh.   5   no.2:342-345   '62.
(MIRA 15:8)

1. Permskiy pedagogicheskiy institut, kafedra khimii.
(Ketones) (Amines)

SHUR, Isaak Arrivelevich; MOSHCHINA, V.N., nauchn. red.; SEGAL',
          Z.G., ved. red.

     [Methods for increasing the safety of boilers operating
     on gas fuel] Sredstva povysheniia bezopasnosti raboty ga-
     zifitsirovannykh kotel'nykh. Leningrad, Nedra, 1964.
     165 p.   (MIRA 17:12)

L 14531-66   EWT(d)/EWT(m)/EPF(n)-2/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(1)

ACC NR: AP6005278 IJP(c)   JD/WW/HW/JG/SOURCE CODE: UR/0413/66/000/001/0017/0017
DJ

INVENTOR: Moskalenko, N. D.; Novikov, O. K.; Pavlov, V. V.; Garibov, G. S.;
Makhnovskiy, V. S.; Zhizhina, T. S.; Rakhinskiy, G. N.; Shur, I. A.

ORG: none

TITLE: Continuous mill for rolling aluminum strips from liquid metal. Class 7,
No. 177395

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 7

TOPIC TAGS: aluminum, aluminum strip, aluminum strip rolling, continuous rolling,
rolling mill, liquid metal rolling

ABSTRACT: This Author Certificate introduces a continuous mill for rolling aluminum
strips from liquid metal. The mill comprises a continuous casting machine with a
mold formed by a metal belt and a wheel, a raw strip guiding stand, a planetary mill,
and a finishing stand. In order to synchronize the casting and rolling rates, the

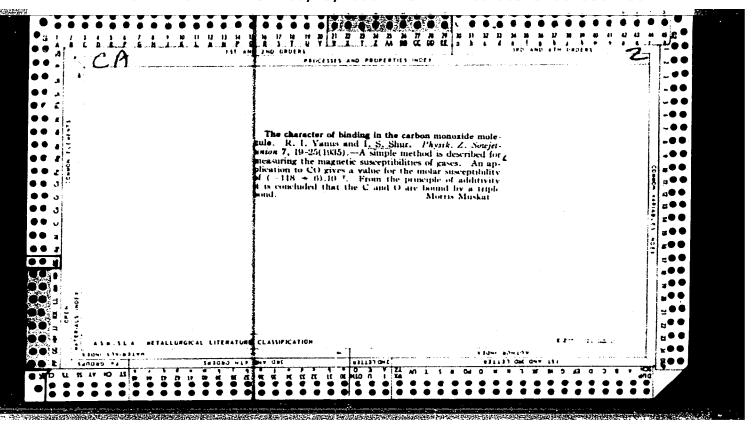Card 1/2   UDC: [669.716:621.746.27] 621.771.237.064

L 14531-66

ACC NR: AP6005278 ◯

continuous casting machine is driven by the lower roll of the guiding stand by means

Fig. 1.   Continuous mill

1 – Ladle for molten aluminum;
2 – mold wheel; 3 – metal belt;
4 – guiding stand; 5 – planetary
stand; 6 – loop former; 7 – finishing
stand.

of a metal belt (see Fig. 1). Orig. art. has: 1 figure.   [WW]

SUB CODE: 11, 13/ SUBM DATE: 06May63/ ATD PRESS: 4/98

Card 2/2

SHUR, I.S., inzhener.
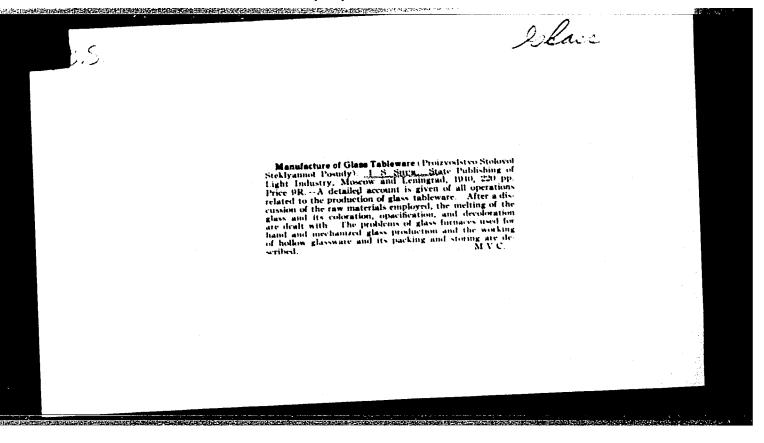
Effectiveness of continuous work schedules in lumbering.
Mekh.trud.rab. 8 no.7:41-42 O-N '54.   (MLRA 8:1)
        (Lumbering)

CA

The character of binding in the carbon monoxide molecule. R. I. Yanus and I. S. Shur. *Physik. Z. Sowjet-union* 7, 19-25(1935).—A simple method is described for measuring the magnetic susceptibilities of gases. An application to CO gives a value for the molar susceptibility of $(-118 \pm 6).10^{-7}$. From the principle of additivity it is concluded that the C and O are bound by a triple bond.

Morris Muskat

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

Manufacture of Glass Tableware (Proizvodstvo Stoklovol Steklyannol Posudy). I. S. Sukh. State Publishing of Light Industry, Moscow and Leningrad, 1940, 230 pp. Price 9R. -- A detailed account is given of all operations related to the production of glass tableware. After a discussion of the raw materials employed, the melting of the glass and its coloration, opacification, and decoloration are dealt with. The problems of glass furnaces used for hand and mechanized glass production and the working of hollow glassware and its packing and storing are described. M. V. C.

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SHUR, J. S., and ABELS, V. R., (Sverdlovsk)

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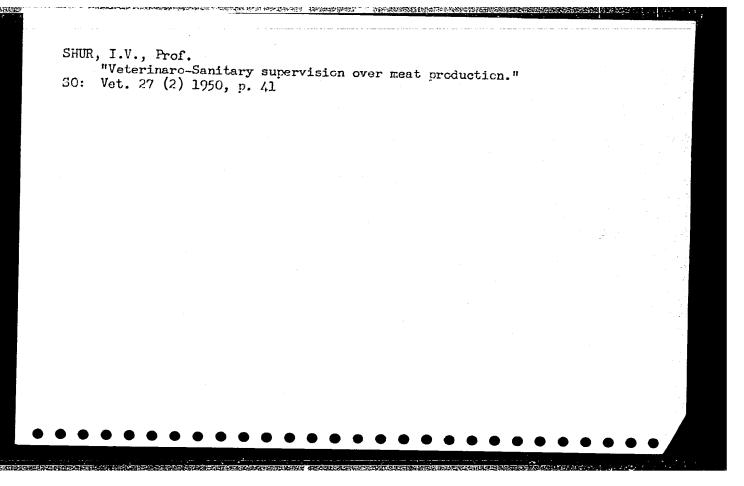Moskva, Gos.izd-vo lit-ry po stroitel'stvu, arkhitekture i stroit.
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ze produktov uboia zhivotnykh i gigiene miasnogo proizvodstva.
Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 687 p.   (MIRA 12:10)
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RUSANOV, R. S., KONUSPAYEVA, U. S., MITROFANOV, V. N., and KAPERNAUMOVA, N. P.,[5].
([1]Professors), ([2]Director of the Laboratory of Microbiology and Veterinary Sanitary
Inspection of VNIIMP [All-Union Scientific Research Institute of the Meat Industry),
([3] Candidates of Veterinary Sciences), (4 Senior Scientific Workers), (5 Junior
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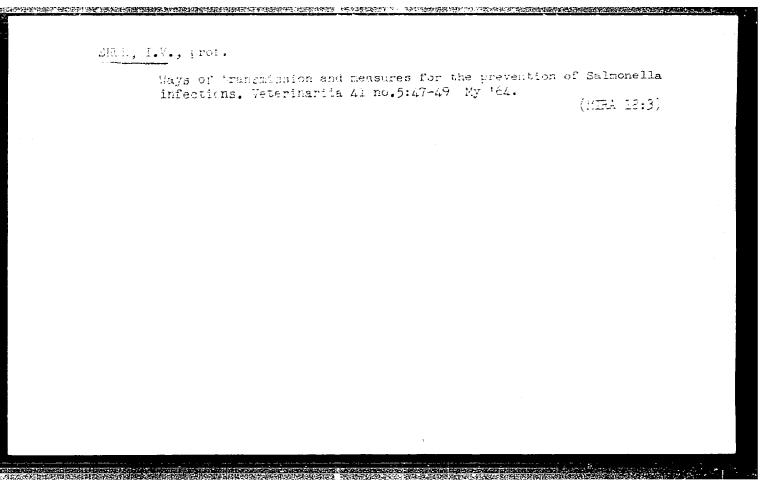   (MIRA 18:2)

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    M.A., kand. veterin. nauk; KRASIL'NIKOV, R.I., starshiy nauchnyy
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    MITROFAN(., V.N., mladshiy nauchnyy sotrudnik; KAPERNAUMOVA, N.P.,
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SHUR, L. I

AUTHORS: Zhdanov, A.P. and Shur, L.I.   120-4-7/35

TITLE: A Determination of the Sensitivity of Photographic Emulsions
           to Charged Particles. (Opredeleniye chuvstvitel'nosti foto-
           graficheskikh emul'siy k zaryazhennym chastitsam)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.4,
                                          pp. 29 - 31 (USSR)

ABSTRACT: The existing methods of estimation of the sensitivity of
       photographic emulsions to charged particles do not give an
       absolute characteristic of the sensitivity. A method is des-
       cribed whereby the sensitivity of a photo-emulsion is determined
       in terms of the energy loss which is necessary for a development
       of a grain, expressed in electron volts or ergs, or, for
       simplicity, in terms of the number of silver atoms. Using this
       method, emulsions having different sensitivity are compared.
       A quantitative approach to the problem of activation also
       becomes possible. Zhdanov's formula (Refs. 5 and 6) for the
       number of developed grains is used. This is of the form:

$$n = k\lambda M(\bar{d}_e/\bar{d})^2/\bar{d} \tag{1}$$

       where   k   is the coefficient depending on the density of AgBr,
Card 1/2